

IN THE DRAWINGS:

The attached three (3) replacement sheets of drawings includes Figures 1-6.

Attachment: 3 replacement drawing sheets

REMARKS

The Examiner's comments in the Office Action dated May 31, 2006, have been carefully considered by the Applicant. Applicant submits this Amendment within two (2) months such that, if necessary, an Advisory Action can issue. Claims 1-19 stand rejected under 35 U.S.C. §102 as being anticipated by Kayama, U.S. Publication No. 2002/0044706 A1. The Kayama reference is a newly cited reference, presenting new grounds of rejection presented for the first time in the Final Office Action. In view of this, Applicant requests that the foregoing amendments be entered because: (1) They do not present new arguments for consideration, but merely combinations of previously presented claims; (2) They put the case in a condition for allowance or, at least, a better form for appeal, if necessary; and (3) Applicant has not previously been afforded an opportunity to address the Kayama reference.

By the foregoing amendments, Applicant has incorporated the subject matter of claim 8 into independent claim 1; incorporated the subject matter of claim 15 into independent claim 14; and incorporated the subject matter of claim 19 into independent claim 17. Any redundant dependent claims have been cancelled. The remaining edits to independent claims 1, 14 and 17 were made for purposes of clarity and not for any reasons related to patentability. Thus, claims 1-7, 10-14 and 16-18 remain for consideration.

Drawing Objections

The replacement drawing sheets filed March 16, 2006 stand objected to because they are faxed copies and are of poor quality. In view of this, Applicant resubmits three (3) sheets of formal drawings herewith containing the same figures as previously presented. Applicant has corrected one typographical error with respect to Figure 1; namely, the first bore of the hub unit was mistakenly identified as reference numeral 40. Accordingly, Applicant respectfully requests that the drawing objections be withdrawn.

Specification Objections

The Final Office Action correctly notes that the bearing assembly is pre-tensioned or pre-loaded, but that the process of assembling the shaft and hub unit does not result in any additional load on the bearing assembly. Accordingly, Applicant has cancelled the objected to language from claims 1, 14 and 17. Claims 1, 14 and 17 have also been clarified to be consistent with the language in the specification in use of the term “pre-load” rather than “pre-tensioning”. These amendments do not add any new matter, and describe the subject matter exactly as claimed, even though the specification does not have to provide *in haec verba* support for the claimed subject matter at issue. *Cordis Corp. v. Medtronic Ave, Inc.*, 339 F3d 1352, 1364 (Fed. Cir. 2003). Accordingly, in view of the claim clarifications, Applicant respectfully requests that the specification objections be withdrawn.

Claim Rejections

Claims 1-19 stand rejected under 35 U.S.C. §102 as being anticipated by Kayama. The Applicant respectfully traverses. Applicant submits that amended independent claims 1, 14 and 17 are novel because the present claims and the prior art differ. Specifically, each of the independent claims require that the wheel hub have an internal groove and the shaft have an external groove for cooperating with the retaining element such that the retaining element can releaseably engage the internal and external grooves to axially locate the hub unit with respect to the shaft in both axial directions.

In contrast, all embodiments of the Kayama reference which do not load the bearings during assembly, disclose a “stepped section 41” formed on the outside end of the spline hole on the inner surface of the hub which engages the retaining ring 15 carried by the shaft. The Kayama reference makes it clear that the coupling member 15 acting against the stepped section 41 only prevents the shaft from coming out of the spline hole in one direction. (See, paragraph [0093]). The coupling arrangement of Kayama, however, does not prevent the shaft from being displaced further to the left with respect to the hub unit in the embodiments of Kayama. Rather, the swaged or

crimped section 26 contacting the outside end surface of the housing section 11 of the drive member 28 prevents the shaft 29 from displacing to the left direction as shown in Figures 1 and 2 of Kayama. (See, paragraph [0091]). As such, the Kayama reference fails to disclose or suggest Applicant's internal groove formed on the hub unit. The reduced diameter step of Kayama is substantially different than Applicant's claimed internal groove.

Because of the cooperating internal and external grooves of the Applicant's claimed assembly, the wheel hub and shaft are axially restricted in both directions by the single retaining ring. Applicant's use of the term "groove" contemplates a channel with opposing end faces – unlike the stepped section 41 as disclosed in Kayama which is analogous to a reduced diameter portion. For this reason, Applicant has made explicit what is implied by the terms "internal groove and external groove" in that, by necessity, axial retention will occur in both axial directions between the hub and the shaft. Thus, no new matter or issues are raised.

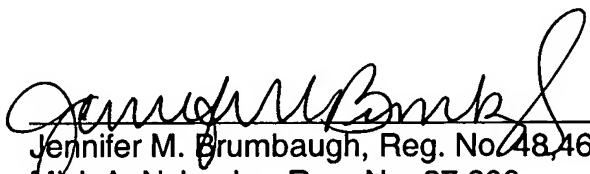
Furthermore, Applicant traverses the suggestion in the Office Action that Kayama discloses Applicant's cooperating grooves in the assembly as claimed. The Office Action's reliance on Figure 6 of Kayama is misplaced in that Figure 6 shows a prior art arrangement whereby the bearing assembly is pre-tensioned or pre-loaded during the act of engaging the wheel hub and shaft. The fact that Figures 1-3 of Kayama disclose improvements over the prior art arrangement shown in Figure 6 supports the patentability of the present claims because Kayama fails to disclose or suggest a cooperating groove arrangement as presently claimed in a pre-loaded bearing assembly wherein the act of engaging the shaft and hub unit does not additionally load the bearings. For this additional reason, Applicant submits that the rejections under 35 U.S.C. §102 should be withdrawn.

Conclusion

Having overcome all of the objections and rejections set forth in the Office Action, the Applicant submits that claims 1-7, 10-14, and 16-18 are in a condition for allowance. A Notice of Allowance indicating the same is therefore earnestly solicited. The Examiner is invited to telephone the Applicant's undersigned attorney, Jennifer Brumbaugh at (248) 377-1200 if any unresolved matters remain with respect to this Response.

Respectfully Submitted,

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